

CLAIMS

1. A method for controlling a prime mover for a vehicle, especially a combustion engine, comprising at least one engine control unit and at least one additional controller in the drive train, with command variable demands being sent by the controller to the engine control unit, and with the transfer function of the prime mover being at least partially depicted by means of a predetermined approximated transfer function of the prime mover, characterized in that the engine control unit calculates at least one parameter of the approximated transfer function of the prime mover and sends the same to the controller, and that in the controller the approximated transfer function is reconstructed at least partly on the basis of the at least one calculated parameter and the command variable demands are modified on the basis of the approximated transfer function which is reconstructed at least in part.
2. A method especially according to claim 1, characterized in that the calculation of the at least one parameter of the approximated transfer function occurs continuously.
3. A method especially according to claim 1 or 2, characterized in that the calculation of the at least one parameter of the approximated transfer function occurs discontinuously.
4. A method especially according to one of the claims 1 to 3, characterized in that the at least one parameter is chosen from the group of delay time, damping, characteristic frequency, phase displacement, maximum gradient in increase of the command variable, and maximum gradient in reduction of the command variable.
5. A method especially according to one of the claims 1 to 4, characterized in that at least one further parameter from the group of setpoint value of the command variable after the end of the command variable intervention, duration of the command variable intervention, sign of the current command variable gradient and information on the purpose of the command variable intervention is sent by the at least one additional

controller to the engine control unit in addition to the command variable demands.

6. A method especially according to claim 5, characterized in that depending on the further parameters the actuating paths in the engine control unit are influenced, preferably on the basis of information on the purpose of the command variable intervention.
7. A method especially according to claim 6, characterized in that the operating parameters are set in a purposeful manner in the direction towards deterioration of the efficiency in the case of a very short command variable intervention in a reducing direction.
8. A method especially according to one of the claims 6 or 7, characterized in that during the command variable intervention the filling in at least one cylinder of the combustion engine is set in such a way that it matches optimally the setpoint value of the command variable after the end of the command variable intervention.
9. A method especially according to one of the claims 1 to 8, characterized in that the parameters are transferred via a data connection line.
10. A method especially according to one of the claims 1 to 9, characterized in that at least the parameters of transferred by the engine control unit to the controller in a standardized form.
11. A method especially according to one of the claims 1 to 10, characterized in that the command variable is chosen from the group of torque, speed, vehicle acceleration, vehicle speed or output.

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